SCIENTISTS IN SUPPORT FOR AN
AMBITIOUS EU NATURE RESTORATION LAW

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Considering that:

- Humanity faces a 'code red' for the climate and life on Earth[1] with both crises fully interrelated;
- The challenges of biodiversity loss and climate change call for a massive upscaling of protection and restoration efforts of natural resources and ecosystems, in parallel with curbing pressures across ecosystems[2];
- The economic benefits of conserving and restoring natural ecosystems 'outweigh' the profit of converting them for intensive human use, especially in terms of carbon storage, flood prevention, soil protection and human health[3];
- Although Europe has one of the strongest nature protection legislations in the world, with a protected area network covering 18% of its land and 9% of its marine territory[4], the European Union's biodiversity and ecosystems are nonetheless suffering severe and continuing decline[5] and, therefore, significant additional efforts and improved legislation are urgently required;
- Europe has the capacity to lead the world by example to make the UN Decade on Ecosystem Restoration a success, contributing to the UN Sustainable Development Goals and re-connecting people with nature;
- The European Commission (EC) is working on a new law, with legally binding restoration targets, as part of the Biodiversity Strategy for 2030 and the European Green Deal announced in December 2019;

We urge, the European political leaders and policymakers to take into account the following actions and considerations to achieve ambitious, timely, cost-effective and long-lasting results from the new restoration law:

1. **Establish a legal principle on ecological restoration in the new EU law.** The 'ecological restoration principle'[6] aims at achieving the highest level of recovery possible and complements existing legal principles in EU law such as the prevention and precautionary principle. Legal principles give guidance to (national) laws and policies and can be used in courts.

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[1] IPCC 6th assessment report (2021) ; IPBES Report (2019)
[2] EU Ecosystem Assessment Report (2021)
[3] e.g. Bradbury et al. (2021); Reaser et al. (2021); Breed et al. (2020); De Groot et al. (2013); IPBES assessment report on land degradation and restoration (2018)
[4] https://ec.europa.eu/environment/nature/natura2000/index_en.htm
[5] https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu
[6] Cliquet et al. (subm.).

2. **Additionality.** The new restoration law must strengthen, build on and complement existing obligations under the Birds and Habitats Directive (recognising that these Directives cover not all of Europe's nature areas and biodiversity), the Water Framework Directive, and the Marine Strategy Framework Directive, all of which should be fully implemented without any delay.

3. **High priority ecosystem types for restoration.** All wetlands and freshwater ecosystems, forests, permanent (semi-natural) grasslands, and shallow marine areas deserve high priority for restoration because of their crucial role in climate change mitigation and adaptation[7]. Minimum area targets for implementation of restoration or re-creation measures (e.g. in percent of the area lost/degraded) should be included in the law for 2030, 2040 and 2050, while recognising that full recovery of ecosystems is a process that takes time. Any further degradation of peatlands, old-growth forests and semi-natural grasslands, wherever present, should be stopped immediately and adequately enforced while eliminating all environmentally harmful subsidies[8].

4. **Methodical approach based on scientific evidence.** Each Member State (MS) should urgently develop a national, science-based Restoration Strategy, in the first place for wetlands and freshwater ecosystems, semi-natural grasslands, forests and shallow marine ecosystems. Ideally, the new EU law should include binding criteria and minimum content requirements for drafting the national strategies, such as current and historical[9] habitat distribution maps, conservation status (including pressures), focus species and a priority plan for restoration, taking fully into account their biodiversity potential. Expert scientists need to be engaged in the process, together with civil society and relevant stakeholders[10], tapping on all types of knowledge[11], also in the planning phase at the site level.

5. **Climate-robust landscape-scale programs.** Sufficient scale of restoration activities is essential to deliver sustainable results and full benefits[12]. The EU law and national restoration strategies need to be linked to other European targets such as the establishment of at least 30% of each biogeographical area being actively protected and managed for nature (with 10% strictly protected), the connectivity needs of Article 10 of the Habitats Directive and the target for the restoration of at least 25,000 km of free-flowing rivers by 2030.

6. **Restoration in urban, agricultural and mining landscapes.** More nature in urban and agricultural landscapes is essential to adapt to climate change for human health, to improve the ecological permeability of these landscapes and to restore typical biodiversity such as farmland birds and pollinators[13]. However, most of such restoration actions will qualify as remediation and rehabilitation rather than as ecological restoration. Therefore, the EU restoration law should make a clear distinction between restoration in urban and agricultural landscapes and the ecological restoration targets for natural and semi-natural ecosystems aiming for the highest possible ecological quality. If properly restored, mining sites can provide surrogate habitats for many species. But the sustainable use of raw materials should be prioritized instead of destruction of habitats with conservation value.

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[7] OneEarth Climate Model: Teske (ed.)(2019); Seddon et al. (2021).
[8] Perry & Karousakis (2020)
[9] Defining reference periods of good ecosystem condition are essential to underpin quantitative and qualitative restoration objectives. Potential Natural Vegetation maps based on soil and hydrological conditions can be used as well.
[10] Swart et al. (2018); Bell & Reed (2021)
[11] Lake et al. (2018)
[12] e.g. Dinerstein et al. (2019)
[13] Pe'er et al. (2020)

7. **Guidance for policymakers and practitioners**. The EC, with the help of the MS and the Scientific Community[14], should offer best practice guidance for ecosystem- and landscape-based implementation of active restoration and assisted spontaneous recovery measures, while highlighting the importance of native and site-specific species and ecological processes at the landscape level, including lack of connectivity and other drivers of biodiversity loss.

8. **Monitoring and reporting**. The EC, with the help of the MS and the Scientific Community, should develop and facilitate a common strategy for monitoring and reporting restoration progress, including population trends of indicator species (such as red list species) and innovative and more efficient techniques (such as remote sensing).

9. **Long-term commitment**. The longevity of the restoration results and favourable prospects of ecosystem development must be assured by sufficient funding for appropriate (adaptive) management and protection.

10. **Restoration is an investment, not a cost.** The EC and the MS must do more to mainstream the socio-economic business case and 'wise stewardship' case for restoration policies to promote and protect the human health and wellbeing of current and future generations.

11. **Restoration funding.** Dismantling adverse subsidies and carbon credit trading, together with existing funding instruments (including climate policy funds) and a substantial increase of government investments, must assure sufficient funding, preferably through a single EU co-funding instrument to reduce administrative burden. Truly sustainable economic growth and development require recognising that our long-term prosperity relies on rebalancing our demand for nature's goods and services with its capacity to supply them. It also means accounting fully for the impact of our interactions with nature across all levels of society[15]. It is necessary to start planning efficient taxing of activities and outcomes in and outside Europe that are harming nature and biodiversity and directing the resulting revenues to the restoration of nature.

12. **Damage to nature from climate policy needs to be fully avoided.** Nature is an essential part of the solution to climate change adaptation and mitigation. Misguided climate action can result in destructive outcomes for both biodiversity and climate. For example, subsidies for using woody biomass for energy production can harm biodiversity[16] and increase losses of valuable forest habitats, or poorly planned infrastructure for creating renewable energy can harm habitats and their connectivity. Afforestation of low nutrient and low carbon soils, such as dunes and dry heaths and grasslands, can destroy priority habitats with unique biodiversity value. Potential trade-offs between climate and biodiversity goals must be foreseen and avoided.

By developing and implementing these twelve recommendations European societies will reduce biodiversity losses and mitigate climate change. **This is essential for coping with the challenges of global change.**

A complete and regularly updated list of supports to this Declaration is available at SER Europe website, www.ser-europe.org

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[14] General guidance in Gann et al. (2019): SER principles and standards for the practice of ecological restoration
[15] The Economics of Biodiversity: The Dasgupta Review (2021)
[16] Camia et al. (2020): The use of woody biomass for energy production in the EU; Van der Wal (2021): Wood pellet damage